1876MNRAS..36..107W

Note on the Variable Star S *Orionis.* By the Rev. T. W. Webb.

Having been informed by Mr. Isaac W. Ward of Belfast, a very intelligent and persevering observer, armed with an excellent 4·3-inch Wray achromatic, that S *Orionis* had been seen by him on November 7, 1875, half a magnitude brighter than Baxendell's *b* and *c*, the stars at the following angles of the triangle enclosing it, I was anxious to seize the earliest opportunity of examining it, but was baffled by the persistency of cloudy weather till November 16. I then found it brighter than those stars; but subsequent observations proved that it was rapidly decreasing. November 20 it was about equal to *b*, and 0·5 mag. above *d*, its next neighbour *s p*, rated by Baxendell 11·1 mag. December 22, 25, and January 1, 1876, showed a continuous diminution, and at the last epoch its superiority over *d* was very trifling; the beautiful ruby colour, conspicuous on November 16, being hardly to be detected by my 9·38-inch mirror. By means of a graphic method, embracing the whole of my observations since its discovery, December 25, 1869, I have attempted a very rough approximation to its period, which comes out about fourteen months, but within wide limits of error, as, in addition to the coarseness of the method employed, only one probable maximum, and no certain minimum, is contained in my observations. The fluctuations, too, during the winter of 1873–4 were such as to raise a doubt as to the regularity of the variation; and, on the whole, this star requires more prolonged attention. I have purposely omitted any reference to the investigations of Prof. Schönfeld, as I have not the whole of them before me; but it is very gratifying to me to find that his far more careful comparison leads to a result not unlike, though much more reliable than, my own.

It may be interesting to remark that a suspicion of variation is attached to the next neighbour, *d* of Baxendell, which I hope to keep in view.

I have increased the number of stars in the triangular group around S to twelve, and a larger aperture or keener eye would probably detect more.

As an idea has been entertained of the connection of red light with variation, I have re-examined three ruby stars, formerly detected by myself, two in *Cygnus*, and one on the borders of *Orion* and *Eridanus*, but have found no sufficient evidence of change.

Hardwick Vicarage, 1876, *Jan.* 11.

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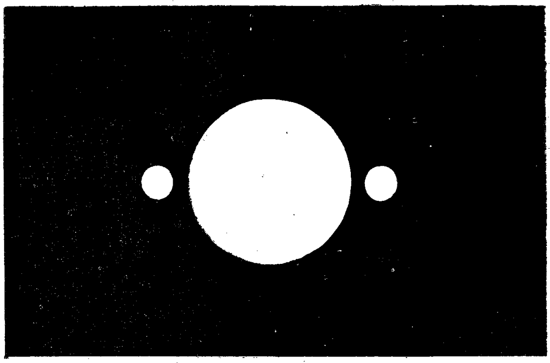
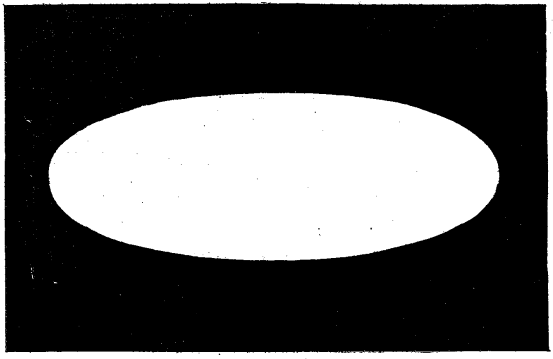
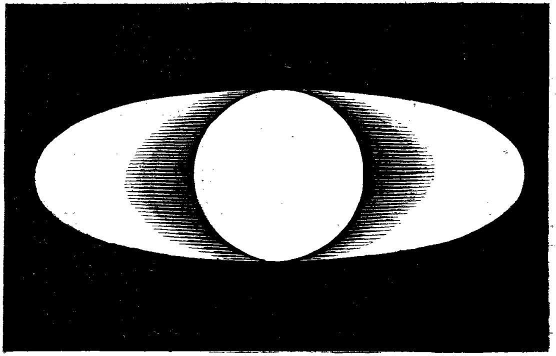
The following woodcuts belong to Mr. Prince's Paper, "On Some Old Drawings of *Saturn*," *ante*, pp. 71–72, and are engraved



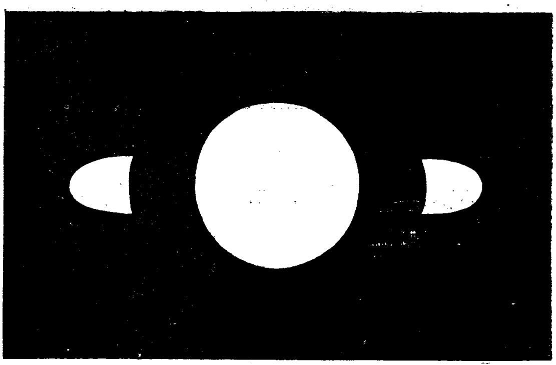
A.
June 19,
1633.



B.
April 13,
1634.



C.
Nov. 20,
1636.



D.
Jan. 11,
1645.

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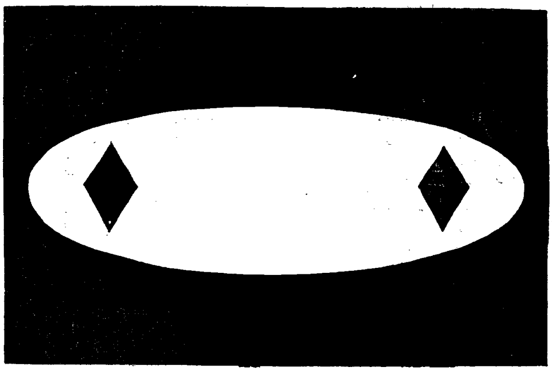
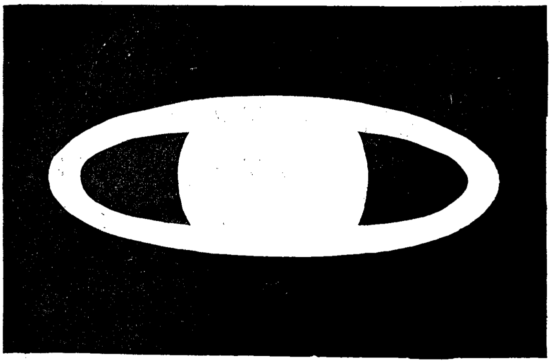
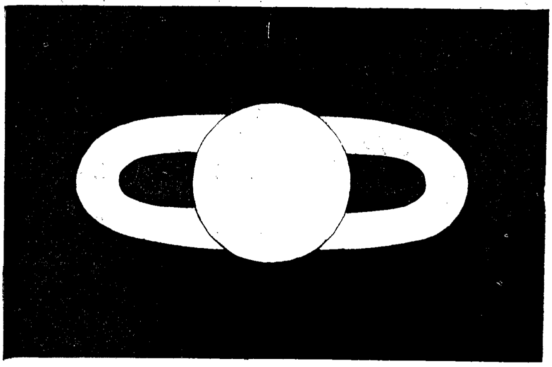
from the therein-mentioned tracings of the engravings of *Saturn* contained in the Lyons Edition (1658) of Gassendi's works.



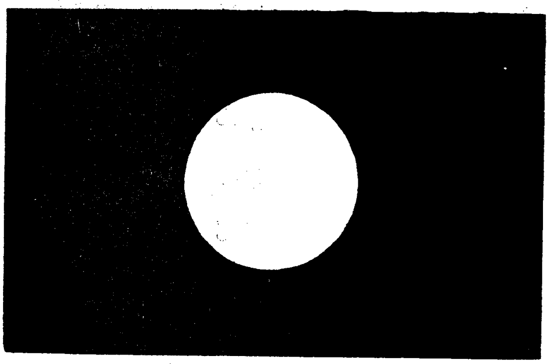
E.
March 18,
1646.



F.
Dec. 8,
1650.



G.
Nov. 21,
1651.



H.
Jan. 16,
1656.